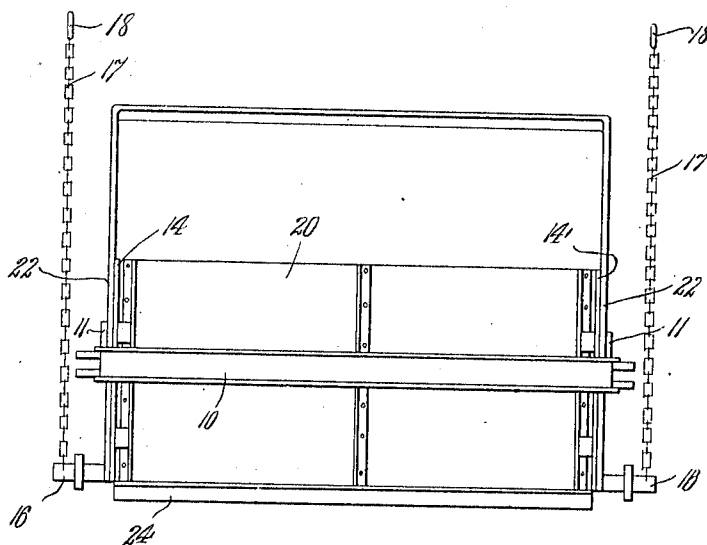
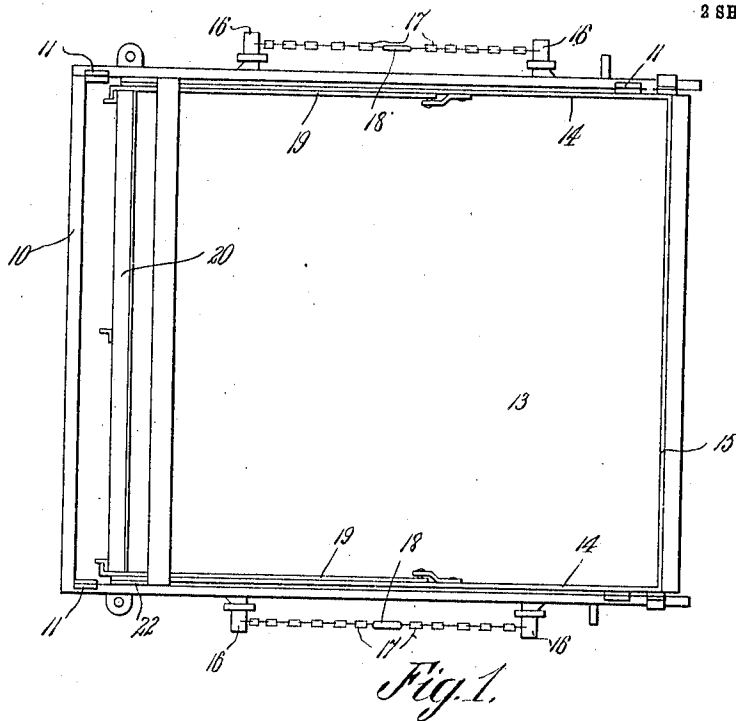


956,946.

V. H. CRITES.
HOISTING BUCKET.
APPLICATION FILED JUNE 21, 1909.

Patented May 3, 1910.

2 SHEETS—SHEET 1.



Witnesses
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M. F. Miller.

Fig. 2.

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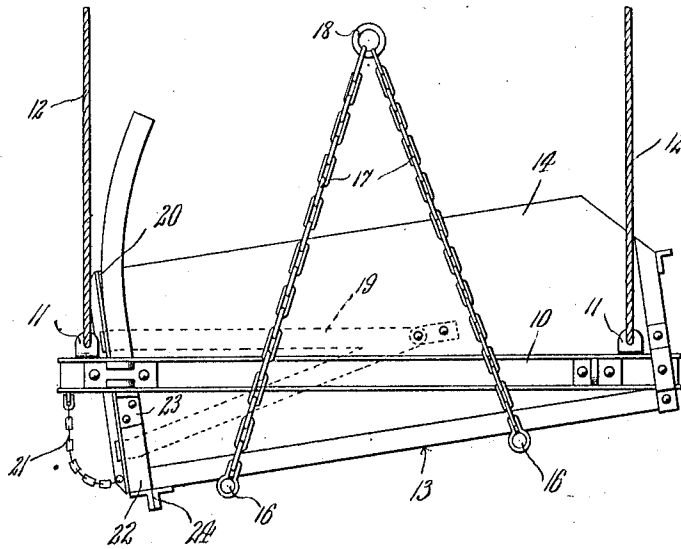


Fig. 3.

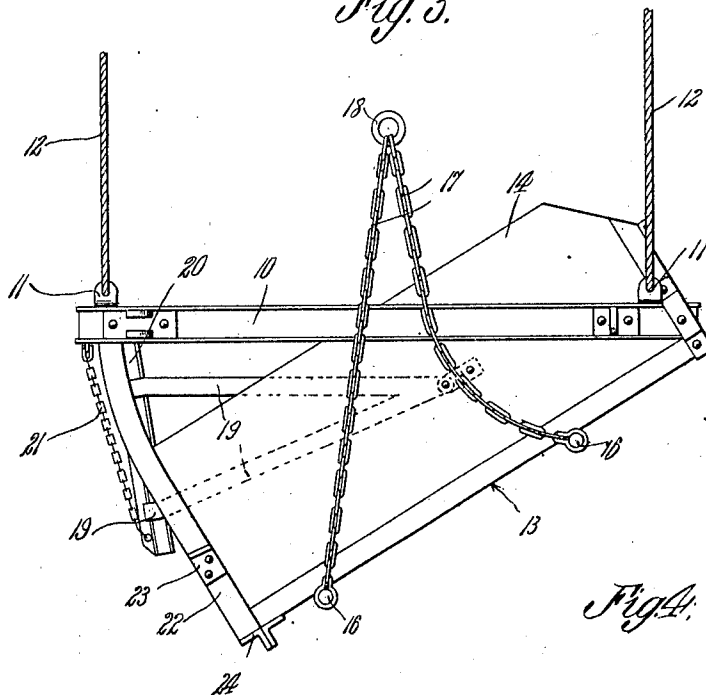


Fig. 4.

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UNITED STATES PATENT OFFICE.

VERNON H. CRITES, OF HUNTINGTON, WEST VIRGINIA.

HOISTING-BUCKET.

956,946.

Specification of Letters Patent.

Patented May 3, 1910.

Application filed June 21, 1909. Serial No. 503,463.

To all whom it may concern:

Be it known that I, VERNON H. CRITES, a citizen of the United States, residing at Huntington, in the county of Cabell, State of West Virginia, have invented certain new and useful Improvements in Hoisting-Buckets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to hoisting buckets and has special reference to a hoisting bucket arranged to dump the material from the end thereof.

One object of the invention is to improve the general construction of buckets of this character.

A second object of the invention is to provide a form of bucket of this class wherein the opening of the door will only be accomplished after the bucket has been tipped.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of a frame having an improved form of bucket hinged thereto; in combination with an improved door and hoisting means.

The invention further consists in certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings, and specifically set forth in the claims.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and:—Figure 1 is a top plan view of a bucket constructed in accordance with this invention. Fig. 2 is an end elevation thereof. Fig. 3 is a side elevation of a bucket when closed. Fig. 4 is a similar view showing the bucket in dumping position.

The numeral 10 indicates the frame of this bucket and this frame is preferably made of channel iron provided with suitable braces at various points in order to hold the same rigid. This frame 10 is preferably of U-shape and is provided with suitable lugs 11 for the attachment of what are preferably termed limit ropes 12, it being preferred that there shall be four of these lugs and that the limit ropes shall be attached to these lugs so that the frame may be kept in a horizontal position.

Pivotally connected to the ends of the arms of the frame is a bucket comprising a bottom 13, side walls 14 and a rear wall 15.

This bucket is provided on each side with a pair of outwardly projecting lugs 16 to which are attached the ends of bridle chains 17 which are united at their upper ends by a link 18 adapted to receive a hook of any preferred hoisting means.

Pivotally mounted on the inside of the bucket and on the side wall thereof are arms 19 the free ends of which carry a door 20, which door is connected at its lower end to the frame 10 by means of a suitable chain 21. Secured to the forward edge of the bucket sides are guide members 22 upon each of which is mounted a stop 23 which, when the bucket is closed, strikes the under side of the frame and relieves its upward movement.

In order to understand the operation of the device, let it be supposed that the parts are in the position shown in Fig. 3 and that the bucket is full of some such material as coal which it is desired to deposit in the hold of a vessel. The bucket is lowered until it is just above the coal which has already been deposited. The limit ropes are then held from further downward movement and the lowering of the hoisting ropes attached to the chains 17 continues. The first action which takes place is that the entire bucket with its door drops downward to the position in which the chain 21 is tautened. The lowering being continued the chains prevent further downward movement of the door while the forward edge of the bucket is allowed to drop still farther. If the limit ropes 12 have been properly adjusted this forward edge will be just above the coal which has already been deposited and the contents of the bucket will slide smoothly out without breaking up the coal or raising clouds of dust. It will be noted from an inspection of Fig. 4 that during this period of the loading the weight is thrown on the forward chain 17 while it is relieved from the rear chain 17. There is thus obtained an increased leverage which permits the forward chain to take the weight during the last portion of the lowering without danger of its breaking since at no time does it support much more than one-half the load.

When it is desired to hoist the bucket the hoisting chains are drawn upward and this results first in the closing of the door and then in the lifting of the door to the original position, it being observed that the forward edge of the floor of the bucket is

provided with reinforcing angles 24 whereon this door strikes during the time that the bucket is closed. There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

Having thus described the invention, what is claimed as new, is:—

1. In a hoisting device, a frame, an open front bucket hinged thereto, stops on said bucket to support the free end of the frame, a door pivotally attached to the bucket, and elements connecting the door and the frame to open said door when the bucket swings on its pivots to a predetermined position.

2. In a hoisting device, a frame, an open front bucket hinged thereto, stops on said bucket to support the free end of the frame, hoisting chain attaching means fixed on said bucket, limit elements attached to the frame to check the downward movement of said frame at a predetermined point, a door pivotally attached to the bucket, and chains connecting the door and frame to limit the

downward movement of the door when the bucket swings on its pivots to a predetermined position.

3. In a hoisting device, a frame, an open front bucket hinged thereto, stops on said bucket to support the free end of the frame, bridle chains connecting each side of said bucket, one end of the bridle being connected adjacent the pivot point of the bucket and the other remote therefrom, limit elements attached to the frame to check the downward movement of said frame at a predetermined point, a door pivotally attached to the bucket, and chains connecting the door and the frame to open said door when the bucket swings on its pivots to a predetermined position.

In testimony whereof, I affix my signature, in presence of two witnesses.

VERNON H. CRITES.

Witnesses:

R. P. ALESHIRE,
S. D. HUNTER.